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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/004,851	12/07/2001	Noriyoshi Nishiyama	2001-1576	8308

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EXAMINER

MULLINS, BURTON S

ART UNIT PAPER NUMBER

2834

DATE MAILED: 03/06/2003

#3

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/004,851

Applicant(s)

NISHIYAMA ET AL.

Examiner

Burton S. Mullins

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) ____ is/are allowed.
- 6) ☒ Claim(s) 1-15 is/are rejected.
- 7) ☐ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on ____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on ____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☒ Certified copies of the priority documents have been received in Application No. 09/471,375.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) n/a.
- 4) ☐ Interview Summary (PTO-413) Paper No(s) ____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Priority

1. Acknowledgment is made of applicant's claim for foreign priority under 35 U.S.C. 119(a)-(d). The certified copy has been filed in parent Application No. 09/471,375, filed on December 23, 1999.

Information Disclosure Statement

2. The information disclosure statement (IDS) submitted on 12 July 2001 has been considered by the examiner.

Claim Objections

3. Claim 1 is objected to because of the following informalities: In claim 1, change "would" to ---wound---. Appropriate correction is required.

Claim Rejections - 35 USC § 112

4. Claims 3-4, 9-10 and 14-15 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claims 3, 9 and 14, recitation "wherein said first interior permanent magnet has its N pole facing said stator and each circumferentially adjacent said at least one other interior magnet has its S pole facing said stator" is vague and indefinite. It is not clear what "each" refers to. The first interior magnet or the "at least one other interior" magnet?

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-6, 9-10 and 12-15, as best understood, are rejected under 35 U.S.C. 103(a) as being unpatentable over Shibukawa et al. (US 5,936,323) in view of Nishiyama et al. (US 6,049,153). Shibukawa teaches an electric vehicle (c.4, lines 19-20) comprising a motor which is to drive wheels of said vehicle, said motor comprising: a rotor 1 having an axis of rotation (Figs.1&2), and also having a first interior permanent magnet 4 including at least two magnet pieces 4A and 4B (Figs.6A-6C) separated from one another in a direction of the axis of rotation by an electrical insulator comprising a clearance/adhesion fill-up agent 7. Shibukawa differs in that the stator coil 12 does not comprise concentrated windings.

Nishiyama, meanwhile, teaches a permanent magnet rotor motor suitable for electric vehicles (c.2, line 14) having concentrated windings which aid in manufacture (c.4, lines 46-65).

It would have been obvious to one having ordinary skill in the art to modify Shibukawa and provide concentrated stator windings per Nishiyama for the purpose of aiding manufacture of the motor.

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Regarding claims 2, 4-6, 10, 13 and 15, the fill-up agent 7 in Shibukawa is 1.5 mm in thickness (c.7, lines 32-33) and comprises a high polymer material (c.2, line 25) such as epoxy resin (c.5, line 2).

Regarding claim 12, note the battery serving as the electric vehicle power source in Shibukawa (c.4, lines 19-20).

Regarding claims 3, 9 and 14, note that the plural magnets in Shibukawa are circumferentially arranged with respect to one another, with adjacent magnets having a reversed polarity with respect to each other in the circumferential direction (c.4, lines 49-51).

7. Claims 7-8 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Shibukawa and Nishiyama as applied to claim 1 above, and further in view of Fukuno et al. (US 5,641,363). Shibukawa and Nishiyama do not teach sintered magnets, per se.

Fukuno teaches the manufacture of rare earth sintered magnets having closed void characteristics which minimizes shrinkage and corrosion (c.5, lines 31-53).

It would have been obvious to one having ordinary skill in the art to modify Shibukawa and Nishiyama and provide rare earth sintered magnets per Fukuno to minimize shrinkage and corrosion.

Regarding claim 11, the fill-up agent 7 in Shibukawa is 1.5 mm in thickness (c.7, lines 32-33)

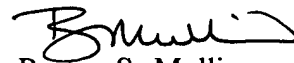
Conclusion

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Burton S. Mullins whose telephone number is 305-7063. The

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examiner can normally be reached on Monday-Friday, 9 am to 5 pm. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nestor Ramirez can be reached on 308-1371. The fax phone numbers for the organization where this application or proceeding is assigned are 305-1341 for regular communications and 305-1341 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 308-0956.



Burton S. Mullins
Primary Examiner
Art Unit 2834

bsm
March 4, 2003